GSM home alarm system
User manual

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1. System Foreword

Wireless GSM intelligent commercial/household guard system employs imported microprocessor together with advanced GSM digital signal handling technology to creatively research and produce GSM wireless mobile intelligent alarming system. It is a high integration of digital speech, Chinese short messages, study-mode wireless coding, long-distance home appliances controlling, short messages identification and other technologies. When alarming, it will automatically inform the theft condition and location through speech or short messages. It is stable, reliable and safe. With humanization manipulation and telecom phone line removed, it can be comprehensively applied to shops, offices, villas, residence community, garage, storage and other places at which wire phone network can NOT cover protection needed. It is able to protect users property and personnel safety.

2. General introduction of functions

■Two groups of timing arming and disarming function, which leave out frequent manual arming and disarming;

■ten zones, can be set as normal, at-home, intelligent or closed types, etc.;

■Using phone (cellphone) or SMS to set the host in long-distance.

■ Four wired zones, six wireless zones, each zone can be equipped with many accessories.

■ Six groups of speech phone, three groups of SMS receiving alarm phone, 10 seconds ISD automatic voice recording.

■one group of normally open signal output, which can be externally linked to appliances linkage alarming output.

■many built-in speeches, letting alarming receivers know the accurate alerting location.

■many built-in short message contents. Short message content from alarming Defense zone can be amended.

■Wireless intelligent study coding, compatible with 2,262 normal encoding and million group encoding, convenient and flexible for adding or reducing accessories.

■Telephone (phone) long-distance telecontrol for arming, disarming, monitoring, talkback, shouting, and controlling home appliances, etc.

■EEPROM information protection, information will never be lost.

■built-in NI=HI pile ricaricabili automatically transferred to stand-by battery after outage with short message prompting.

■Both AC and DC, twenty-four-hour normal guarding and unbroken service.

■The host using double GSM/GPRS wireless industry module, which is stable and reliable.

3. Manipulation specification

3.1 Arming

Arming means that when there are no persons at home, and need to all-around guarded. All detectors are working. When something triggers the detectors, the alerting system will alarm at once. After arming operation, arming light in the host will be always on.

Remote control operation: pressing on the arming key in the remote-control-unit once is OK.

3.2. At-home arming

At-home arming means that when there are some body at home, for the sake of security, it is needed to make the outside doors, windows, balconies, and around detectors of the alerting system

work. But, it is also needed to avoid the person at home from triggering the domestic detectors to alert wrongly. At that time, we choose at-home arming, letting some detectors work and the other not. At-home arming function needs to be settled for normal usage. The arming light in the host will flicker when at-home arming is open.

Remote control operation: pressing on the at-home arming key in the remote-control-unit once is OK.

3.3 Disarming operation

Disarming means that when host alerts, it can stop the alerting or make the system on the disarm status. After disarming, even triggering detectors can NOT make the host alert, except the detectors in emergency Defense zone or emergency key in the remote-control-unit. After disarming, arming light dies out.
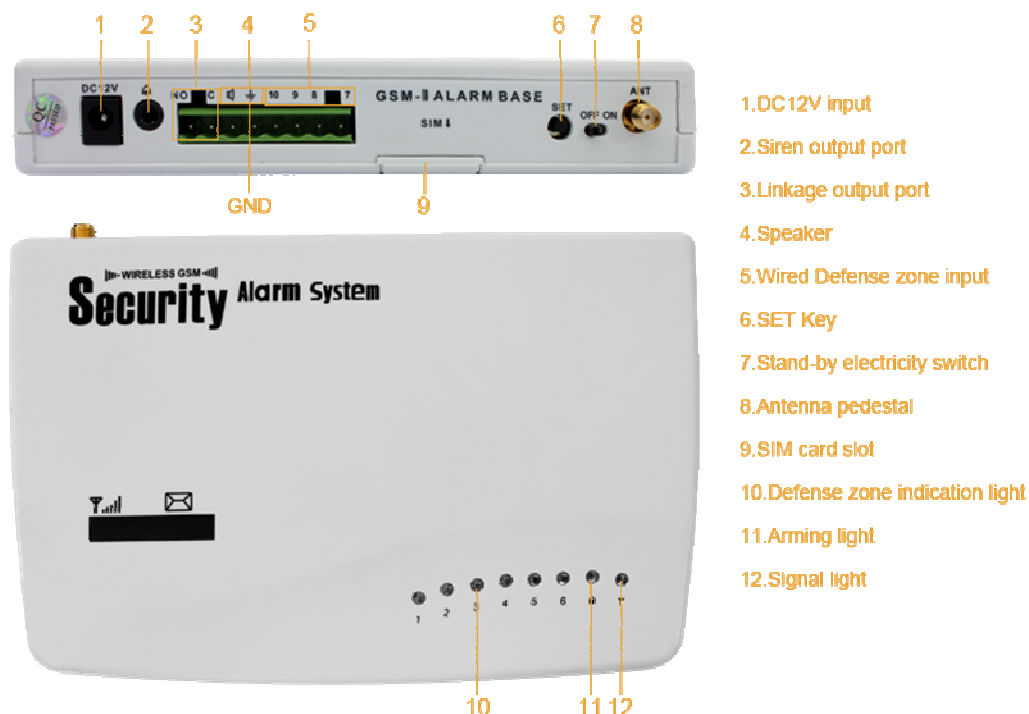
3.4 Emergency alerting

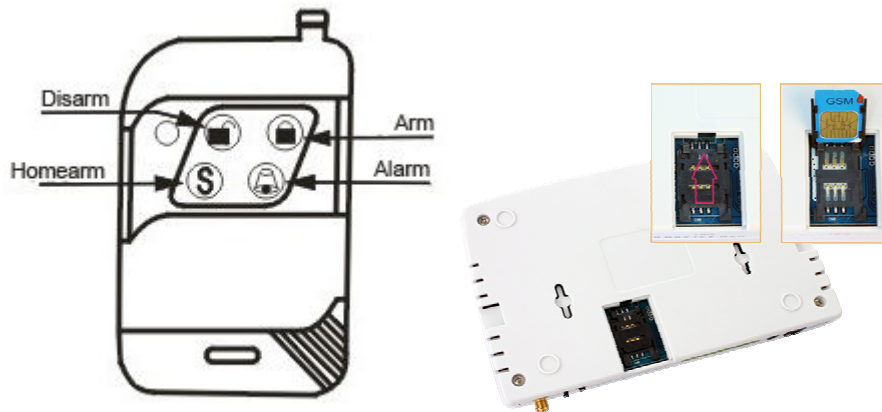When emergency happens, press on the emergency key in the remote-control-unit.

4. Installation and debugging

■host and SIM card installation

We should try our best to install the host in the central zone of the guarding place so as to make sure that all wireless detectors can five the best receiving effect. Take care and keep away from large-scale metal objects or household appliances with high-frequency interference. And at the meantime, the host should be away from the steel-bar concrete wall and anti-fire door, and other barriers.

The control panel in the host:

1.DC12V input

2.Siren output port

3.Linkage output port

4.Speaker

5.Wired Defense zone input

6.SET Key

7.Stand-by electricity switch

8.Antenna pedestal

9.SIM card slot

10.Defense zone indication light

11.Arming light

12.Signal light

5. The host settling
■ indicating information

function	Signal	Interpretation
Buzzer	Short "Beep" once	Key-pressing indication
	Long "Beep" once	Confirm received of a key stroke
	Continuousshort "Beep" for 2 times	Correct command received
	Continuousshort "Beep" for 3 times	Error in command
	"Beep"at moderate intervals	SIM card not found
Defense Zone LED	Always lit	Defense zone alerting
	Blinking	Defense zone coming into delayed alerting
Arming LED	Always lit	Arming status
	Blinking quickly	Coming into At-home arming status
	Blinking slowly	Coming into delayed arming status
GSM signal LED	Blinking every 1 second	GSM signal weak, or SIM card not found
	Blinking every 3 seconds	GSM module, and SIM card working properly
	Not lit	Without electricity

■first-time energization

Upon correctly installed SIM card, all wired sensors (if applicable) and antenna, the AC adapter can be connected. Upon power up, the alarm panel will carry a self-test as sequence below:

- Six Defense Zones' LED and two Functional LEDs on front panel will flash in order once and end with a buzzer long "Beep".
- The Signal LED flashes with one second interval for checking the GSM signal.
- If GSM network detected all right, "Beep" sound stops and Signal LED becomes flashing every three seconds, the GSM signal and SIM card are all confirmed normal, system is READY.
  At last, putting the stand-by battery switch to be "ON" is OK.

■remote control coding

Remote control coding

Upon the alarm panel at the state of disarming, follow the steps below to add remote control to panel.

1. Press the [SET] key once and release immediately, alarm panel returns one short "Beep" and all Defense zone LED lid, this is the configuration mode for remote control coding.
2. Press any key on the remote to trigger a wireless signal to the Panel.
3. When panel receives signal and "Beep" twice, it means remote control (keyfob) has been added to panel successfully, this remote control can be used to control the panel.
4. If panel receives signal and "Beep" only once, it means remote control (keyfob) has been learnt before.
5. You can take out all remote controls required to configure and trigger them one by one by repeating step (3) above.
6. Pressing [SET] key again and again until all Defense zone LED off to exit the configuration model and system READY again.
   Note: The Panel allows a maximum of 20 remote control (keyfob).

Remote control deletion

Upon the alarm panel at the state of disarming, follow the steps below to delete remote control to panel.

1. press the [SET] key once and release immediately, alarm panel returns one short "Beep" and all Defense zone LED lid, this is the configuration mode for remote control coding.
2. Then press and hold the [SET] key for 3 seconds, panel "Beep" for a long time and all Defense zone LED vanished means all remote control deleted.

Note: For the remote control (keyfob) deletion operation, one operation will delete all remote control (keyfob).

■Defense zone coding

Defense zone coding

Upon the alarm panel at the state of disarming, follow the steps below to add sensors or detectors to panel.

1. Press the [SET] key once and release immediately, alarm panel returns one short "Beep" and all Defense zone LED lid, this is the configuration mode for remote control coding.
2. Press [SET] key once and release immediately, Defense Zone 1 LED on, this is the configuration mode of zone 1.
3. Trigger the detectors send a wireless signal to the Panel.
4. When panel receives signal and "Beep" twice, it means remote control (keyfob) has been added to panel successfully, this remote control can be used to control the panel.
5. If panel receives signal and "Beep" only once, it means remote control (keyfob) has been learnt before. If panel receives signal and "Beep" for 3 times, it means error.
6. You can take out all remote controls required to configure and trigger them oneIby one by repeating step (3) above.
7. Pressing [SET] key again and again until all Defense zone LED off to exit the configuration model and system READY again.

Note:A Panel can learn up to 32 detectors of different types.

Defense zone code deletion

Upon the alarm panel at the state of disarming, follow the steps below to delete remote control to panel.

1. press the [SET] key once and release immediately, alarm panel returns one short "Beep" and all Defense zone LED lid, this is the configuration mode for remote control coding.
2. press [SET] key once and release again until the LED of the Defense wanted is on, this is the configuration mode of your target zone.
3. Then press and hold the [SET] key for 3 seconds, panel "Beep" for a long time and all Defense zone LED vanished means all remote control deleted.

Guideline for Installing Door or WindowSensor

1. The surface for door sensor installation should be clean so door sensor can be attached to the door and frame firmly with double faced adhesive.
2. Each door sensor is a pair of sensor and magnet. The sensor should be installed on the fixed door frame and the magnet should be placed on the movable door with a distance not exceeding 1 cm.

Guideline for Installing PIR Motion Sensor

1. Installation height is about 2.2 meters above ground and the optimized detection angle for most motion detector is 90 degree. The sensor should face the detected area with this consideration for best coverage.
3. Within coverage of detection, there should be no any objects for obstruction.
4. There should be no two infrared detectors in the same as they will possibly intervene with each other.
5. Avoid the detector facing window, cooling or warming machines, or other appliances that cause the temperature changing sharply and thus cause false alarm.
6. Most infra-red detector needs about 5 minutes to heat up before READY for normal operation.
7. Unless specifies otherwise, most infra-red detector are indoor use and not reliable to use outdoor.

6. Cell phone long-distance-control programming

■**All programming for this host are completed through cellphone or fixed phone call host GSM card, pressing on the keys in fixed phones or cellphones or sending short messages via cellphone.**

On working status, and GSM network detection is normal. Use cellphone or fixed phone to dial SIM card number in the host, it will automatically receive the call. After pick up the phone, please enter the passwords, the default password is 1234, then press # key to enter phone long-distance function settling.

■**General Command Syntax**

There are two methods to configure the alarm panel, they aresending SMS command to panel via mobile phone and interactive setup using any analog phone set.

1) general command pattern sent via SMS is

[password] + [command] + [parameter] + #

e.g. setting SMS phone no.

1234379999999#

2) general input sequence sent via phone interactively is

- call in

- key in password

- key in #

- key in [command]

- key in [parameter]

- key in #

using the above same example, no. need to key in one by one after receipt the confirmation beep

1234#37999999#

Number setting and function setting command as follow:

[12]+[0/1]+[#]	Disable and enable SMS Messages function
	● 0 means not activated.
	● 1 means activated
	● Default: activated
	● Example: to disable SMS Messages function, send SMS Messages 1234120#, or using phone should input 1234 # 12 0 #
[31]+[phone number]+[#]	Add (or delete) 1stgroup of phone number for voice calling upon alarm triggered
	● Example: if the user wants to add phone number 12345678, send SMS Messages 12343112345678#, or using phone should input 1234 # 31 12345678 #
	● Example: if the user wants to delete 1stgroup number, send SMS Messages 123431#, or using phone should input 1234 # 31 #
[32]+[user number]+[#]	Add (or delete) 2ndgroup of phone number for voice calling upon alarm triggered
[33]+[user number]+[#]	Add (or delete) 3rd group of phone number for voice calling upon alarm triggered
[34]+[user number]+[#]	Add (or delete) 4thgroup of phone number for voice calling upon alarm triggered
[35]+[user number]+[#]	Add (or delete) 5thgroup of phone number for voice calling upon alarm triggered
[36]+[user number]+[#]	Add (or delete) 6th-group of phone number for voice calling upon alarm triggered
[37]+[user number]+[#]	Add (or delete) 1stgroup of phone number for receiving SMS messages
	● Example: if the user wants to addphone number 12345678, send SMS Messages12343712345678#, or using phone should input 1234 # 37 12345678 #
	● Example: if the user wants to delete second-group number, send SMS Messages 123437#, or using phone should input 1234 # 37 #

[38]+[user number]+[#]	Add (or delete) 2nd groupof phone number for receiving SMS messages
[39]+[user number]+[#]	Add (or delete) 3rdgroup of phone number for receiving SMS messages
[50]+[new password]+[#]	Modify user operation password ● For example: if user wants to set new user password as 4321, please send SMS Messages 1234504321# , or using phone should input 1234 # 50 4321 #
[51]+[00-99]+[#]	Set Delayed Arming, when press the arming key from the remote control, it will not enter into arming status immediately but delay for a certain number of second ● Range: From 0 to 99 seconds. ● For example: set delayed arming for 10 seconds, send SMS Messages 12345110#, or using phone should input 1234 # 51 10 #
[52]+[00-99]+[#]	Set Delayed Alarming, on the arming status, if a detector is triggered, the Panel will not alarm at once. It will delay a certain time beforemaking voice calling, sending SMS message or sound the siren. ● Range: The time can be set from 0 to 99 seconds. ● For example: set delayed alarming time as 10 seconds, send SMS Messages 12345210#, or using phone should input 1234 # 52 10 #
[53]+[00-20]+[#]	Setting the siren sounding time when the Panel triggered. ● Default time is 1 minutes ● Range: From 1-20 minutes. ● For example: if you want to set the siren alerting time 5 minutes, send 12345305#, , or using phone should input 1234 # 53 05 #
[54]+[0/1]+[#]	Open and close of alerting linkage. If the Panel alerts, need the relay open linkage or not, 1 means linkage needed, and 0 not. ● For example: Panel relay output is connected to flashlight and other equipment. If output alerting, it needs linkage blinking. Send SMS Messages 1234541#. When the Panel triggered, the output relay at the back of the Panel will be connected, and external equipment will start up. Telephone setting: just press those key on the phone.
[55]+[0/1]+[#]	Used to set when use remote control to arm and disarm, the siren makes sound or not. ● Value: 1 means sound, and 0 not. ● Default is: making sound. ● For example: send SMS Messages 1234551#, meaning siren without indicating voice when arming and disarming by remote control (keyfob). Telephone setting: just press those key on the phone.
[56]+[AAAA]+[#]	Used to set system time. ● For example: to set system time as half past 20 o'clock, send SMS Messages 1234#562030#. This means to set system time as half past 20 o'clock. Telephone setting is just press those key on the phone.

[57]+[AAAA]+[BBBB]+[#]	Used to set first group of timing arming and disarming.
	• For example: send SMS Messages 12345722000700# to Panel. This means from 22 o'clock at night, it automatically enters into arming status, and automatically disarms at 7 o'clock in the morning. Telephone setting is just press those key on the phone.
[58]+[AAAA]+[BBBB]+[#]	Used to set second group of timing arming and disarming.
	• For example: send SMS Messages 123458120001300# to Panel. This means from 12 o'clock at noon, it automatically enters into arming status, and automatically disarms at 13 o'clock in the afternoon, telephone setting just press those key on the phone.
[60]+[AA]+[B]+[C]+[#]	This command is used to set six Defense zones status.
	• AA is double subarea and 01 to 06 means Defense zones 1 to 6.
	• B means the type of Defense zone.
	1 means NORMAL Defense Zone,
	2 means STAY Defense zone,
	3 means INTELLIGENT Defense zone,
	4 means EMERGENCY Defense zone,
	5 means CLOSED Defense zone.
	• C has two types of status.
	0 means siren no sound when alarming,
	1 means siren sound when alarming.
	• For example: to set 5thDefense zone as NORMAL Defense Zone, and the 5thDefense zone alarming requires siren sounding, send SMS Messages 1234600511#

[61]+[AA]+[B]+[C]+[D]+[#]	This command is used to set the status of the four wired Defense zones.
	• AA is double subarea, use 07 to 10 to refer to Defense zones 7 to 10.
	• B means the type of Defense zone.
	1 means NORMAL Defense Zone,
	2 means STAY Defense zone,
	3 means INTELLIGENT Defense zone,
	4 means EMERGENCY Defense zone,
	5 means CLOSED Defense zone.
	• C has two types, 0 and 1.
	0 means no rings in that Defense zone when alerting.
	1 means ringing in that Defense zone when alerting.
	• D has two types, 0 and 1.
	0 means open circuit alerting and
	1 means short circuit alerting.
	• For example: set Defense zone 7 as EMERGENCY Defense zone, no siren ringing when the 7thDefense zone alerts, and short circuit alarming, send SMS Messages 12346107101#

[13]+[0000]+[#]	This command to restore the factory default setting.
	● This command will only delete the password, but not delete the remote control and sensors already programmed.
	● For example: if need to restore the factory default setting, send 1234130000# to the main unit.
	● If the users forget password, to restore the device need to use**Forced Restore**.Steps are
	■ Turn off the back-up battery switch and AC power
	■ Press and hold RESET button at the back while turn on the power
	■ Keep press and hold the RESET button for about 5 seconds until the buzzer gives one long "Beep" and all LED flash in sequence, then release RESET button, all setting deleted, phone number deleted, password return to 1234, all remote control and sensors deleted, alarm panel fully returned to factory setting.

Operation Commands

Following commands only for SMS Messages long-distance operation and settlement:

0#	Long-distance SMS Messages disarming, send SMS Messages 12340#
1#	Long-distance SMS Messages arming, send SMS Messages 12341#
2#	Long-distance SMS Messages STAY arming, send SMS Messages 12342#
3#	Long-distance SMS Messages Relay opening, send SMS Messages 12343#
4#	Long-distance SMS Messages Relay closing, send SMS Messages 12344#
[20]+[#]	To inquire arming and disarming status. send SMS Messages 123420#
[21]+[#]	To inquire alerting number and alert-receiving number configured in the panel. send SMS Messages 123421#
[80]+[#]	Used to inquire SMS Messages contents from all Defense zones.
	● For example: send SMS Messages 123480#
[81]+[Defense zone one, SMS Messages content]+[#]	Used to set SMS Messages content given by Panel when the first Defense zone alerts. SMS Messages content can NOT exceed twelve characters.
	● For example: send SMS Messages "123481 the front door is opened # " At that time, when the first Defense zone is triggered, the SMS Messages of "the front door is opened" will be sent to the short-message alarming number.
[82]+[Defense zone two, SMS Messages content]+[#]	Used to set SMS Messages content given by Panel when the second Defense zone alerts. ditto
[83]+[Defense zone two, SMS Messages content]+[#]	Used to set SMS Messages content given by Panel when the third Defense zone alerts. ditto
	The forth to ninth Defense zone can be inferred as above.
[90]+[Defense zone ten, SMS	Used to set SMS Messages content given by Panel when the tenth Defense zone

Messages content]+[#]	alerts. ditto

■Telephone alert-receiving

After host alerts, it will automatically dial all pre-set telephones and cellphones in sequence. When the user picks up the phone, it will immediately broadcast alerting record and let user obtain the alarming information. After phone received, if only listen to alerting voice without long-distance control, please directly hang up, the host will continuously dial the latter phone for alerting, until someone picks up. If there is no person receiving calls, the host will dial all phones in circulation for three times, then automatically hang up and at the same time, it conducts long-distance remote control on the alerting host through telephone and cellphone keyboard operation:

【1】key: Arming   【2】key: Disarming
【3】key: Monitoring   【4】key: Monitoring closed
【5】key: Talkback open   【6】key: Talkback closed
【7】key: Siren ringing   【8】key: Siren closed
【9】key: Relay open   【0】key: Relay Closed
【*】key; Quits from the status and hang up, the system will not dial the next group of numbers.

NOTE: monitoring time is 20 seconds. If continue to monitor, user needs press "3"key again. To support talkback function, the host needs to connect to another passive loudspeaker, which are 8 ohm and its power above 0.5W.

■Telephone long-distance operation

Dial the phone number connected to the alerting host through telephone or cellphone. After a cycle of ringing, input password, default password is 1234, then pressing phone or cellphone keys.

Concrete operation is as follows:

【1】key: Arming   【2】key: Disarming
【3】key: Monitoring   【4】key: Monitoring closed
【5】key: Talkback open   【6】key: Talkback closed
【7】key: Siren ringing   【8】key: Siren closed
【9】key: Relay open   【0】key: Relay Closed
【*】key; Quits from the status and hang up, the system will not dial the next group of numbers.
【#】key: Enter the system settling.

If without any operations, the host will automatically hang up and quit after 20 seconds.

7. Note: Difference between Defense Zone Types:

● NORMAL Defense Zone: the Panel only works on the arming status. When disarming, there is no response.

● STAY (at-home) Defense zone: can be shut off solely through the remote control (keyfob) to avoid the Infrared Detectors and other in-room detectors from misinformation when master is resting at home.

● INTELLIGENT Defense zone: if the detector in the Defense zone is triggered only once, it will not immediately alarm. But if being triggered once again within 30 seconds after the first

triggering, it will not alarm immediately.

- EMERGENCY Defense zone: no matter on arming or disarming status, if detector is triggered it will alert. Usually used in connecting with Smoke Detectors, Gas Detectors and emergency button, etc.

- CLOSED Defense zone: no matter arming or disarming status, detectors will not alert even being triggered.

8. Leaving-factory default

Password:	1234		
Long-distance control:	Open	Ringing times:	once
Siren timing:	1minute	Aural remote control siren:	open
Delayed arming:	0second	Delayed alerting:	0 second

9. System Specification

- Input voltage: DC 9V – 12V
- Standby current: ＜25mA
- Alerting current: ＜450 mA
- Wireless frequency: 315/433/868/915MHZ, 2262/1.5--4.7M, EV1527/300K.
- GSM SYSTEM: supporting GSM850/900/1800/1900MHz
- Standby battery: NI-HI AAA*6   DC7.4V
- Siren loudness: 110dB
- Accessories parameters: this annunciator is compatible with PT2262 code; PT2240 code and EV1527 shorten code. In use of PT2262 code, timing resistor is suggested 1.5M to 4.7M. In use of EV1527 shorten code, timing resistor is 300K. The address code A0-A7 of door status switch, infrared and other accessories can be any code. We do not suggest it is all empty. Data code D3-D0 is any code except 0001, 0010, or 0100. It is suggested to use 1010.

11. Troubleshooting

Problem	Probable Reasons	Available Solutions
1. cannot dial for alarm	- no arming - alerting phone unsetted - parts improperly installed - code no match - SIM card overdue	- do arming operation - re-set according to the specification - coordinating the location of parts - re-coding 5. pay to the SIM card
2. cannot long-distance operation	password input wrongly (or forgotten)	retry password or reset password
3. no record indication when alerting	voice message not recorded	record voice message
4. remote control (keyfob) out of order	- coding un-matched with the Panel - insufficient battery power	- re-learn the remote control - change battery to correct type

	battery pieces poor contact or voltage un-matched with Panel	contact the local dealer to change the matched remote control (keyfob)
5. infrared detector out of order	• low power	• change to the same type battery
6. siren without sound	• siren plug or jack in short circuit or broken-line • siren out of order • closed siren by command • positive and ground wires of siren reversed	• repair or change plug or jack • change the jack line • activate siren by command • use another siren to double check • reverse the wires to try
7. the transmission distance of detector to panel shorten	• a nearby emitter is sending code • Panel receiver stoppage • standby battery of the Panel insufficient	• move one detector next to panel and try • identify the interfering source and eliminate it • check Panel power whether plugged well
8. the signal LED blinking quickly	• SIM card un-loaded • SIM card is setting PIN code • GSM signal weak	• reload SIM card • cancel PIN code of SIM • change to place with strong signal